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Former Westward Service Station,
330 Tilehurst Road
Reading,
RG30 2NG

Groundwater Monitoring Report

SLR Ref: 408.03545.00004

May 2011

London & Boulton Ltd

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1.0 INTRODUCTION

1.1 Background

SLR Consulting Ltd (SLR) was commissioned by London & Boulton Ltd (L&B) in April 2011, to undertake environmental assessment work at the former Westward Service Station at Tilehurst Road, Reading, RG30 2NG (the Site).

This report documents the groundwater monitoring, sampling and analysis work undertaken at the Site in April 2011 and provides an assessment of the onsite conditions.

1.2 Background

L&B acquired the Site from Total UK Limited (TUK) in 2010. At the time of acquisition the Site was disused and derelict and the earlier fuel storage and distribution infrastructure had been removed (i.e. underground storage tanks (USTs), pump islands and fuel lines).

The Site has been the subject of several phases of previous investigation, risk assessment and voluntary remedial action by TUK and its consultants (Arcadis) prior to 2010. Plans showing the Site layout and borehole locations are contained Appendix A.

1.3 Scope of Work

The scope of work undertaken was devised by SLR and comprised the following tasks:

- health and safety planning;
- monitoring and sampling of the groundwater from on site boreholes;
- environmental laboratory analysis;
- project management and supervision of the above tasks for L&B;
- reporting.

2.0 SITE DETAILS, SETTING AND HISTORY

2.1 Site Vicinity Description

Tables 2-1 and 2-2 summarise the property details. Information has been obtained from Ordnance Survey (OS), Environment Agency (EA), British Geological Survey (BGS) mapping, the previous assessment reports and the Site visit.

**Table 2-1:
Site Details**

Former Westward Service Station, 330 Tilehurst Road, Reading, RG30 2NG.		
Site Location	The Site is located on the northern side of Tilehurst Road, approximately 3km west of Reading town centre. National Grid Reference 468728,172992 identifies the approximate site location.	
Current Usage	Disused former petrol station.	
Site Facilities	A two storey building (disused), all previous petrol station infrastructure has been removed.	
Surrounding Land Use	North	Car maintenance and repair garage with residential properties beyond.
	East	Residential properties.
	South	Tilehurst Road with Prospect Park beyond.
	West	Access road to garage beyond which are residential properties.

2.2 Physical Site Setting

A summary of the main physical features of the Site are given in Table 2-2.

**Table 2-2:
Physical Site Features Summary**

Geography and Geology	Gradient	The Site is relatively flat lying .
	Elevation	Approximately 63m above the Ordnance Datum.
	Superficial Drift Geology	None recorded.
	Solid Geology	Lambeth Group over Upper Chalk (at depth).
Hydrology	Surface Water	The Holly Brook is 1.4km to the south and The River Thames is 1.6m to the north. Arcadis ¹ also identified a pond 400m to the southeast.
	Surface Water Abstractions	No surface water abstractions were reported by Arcadis within a 2km radius of the Site.
Hydrogeology	Aquifer Status	The Site is underlain by a Secondary A Bedrock Aquifer (Lambeth Group) and a Principal Bedrock Aquifer (Chalk).
	Groundwater Abstractions	Arcadis reported 11 groundwater abstractions within 2km of the Site, the nearest being 1450m to the northeast which is used for agricultural purposes.
	Source Protection Zones (SPZ)	The Site is within the Total Catchment of a SPZ (Zone III).

¹ Tier 1 Environmental Assessment Report, Westward Service Station, Tilehurst Road, Reading. February 2003.

2.3 Site History and Previous Investigation findings

2.3.1 History

The previous desk study data identified the Site as undeveloped until at least the 1960s when it is shown as a garage. This is consistent with the date of 1966 when the Petroleum Licensing Authority first recorded underground storage tanks (USTs) on site.

When the TUK investigated the property in 2002 the petrol filling station was disused and the property was being used for car sales.

2.3.2 Previous Recorded Geology

Reference should be made to the earlier reports for full details of the previously recorded geology. However three distinct geological units were recognised:

- Made ground – gravelly sand and sandy gravel that extends to depths of between 2.0m and 4.6m².
- Lambeth Group – clayey fine to medium sands that extend to depths of up to 10.2m and were underlain by firm to stiff clays and clayey fine sands. The base of this horizon was at approximately 13m.
- Upper Chalk – recorded beneath the Lambeth Group strata and proved to a depth of 30m.

2.3.3 Previously Recorded Hydrogeology

The previous investigations identified two distinct groundwater bodies beneath the Site, a shallow groundwater body within the Lambeth Group strata at depths of between 7.5 and 8.0m and a deeper aquifer at depths of 22 to 23m within the Upper Chalk.

Groundwater flow within the Lambeth Group was estimated to be towards the north northeast and towards the south in the chalk.

2.3.4 Previous Assessment and Remediation Work

The Site has been the subject of multiple phases of investigation, risk assessment and voluntary remedial action by TUK and its consultants (Arcadis) which are detailed in the reports listed in Table 2-3.

The investigation and assessment work undertaken between March 2002 and March 2007 identified the presence hydrocarbon impacts in both soil and groundwater samples within the Lambeth Group strata. Non aqueous phase liquid (NAPL) was also identified in two wells (EXA and EXB) in October 2006 and comprised weathered petrol and diesel. Within the Chalk strata soil impacts were not identified and dissolved phase groundwater impacts were only recorded in the groundwater in MW7 at trace levels in 2005 (0.091mg/l TPH, 0.054mg/l MTBE, 0.002 mg/l benzene). Concentrations were less than method detection limits (MDLs) in all of the other deep wells (MW6, MW8 and MW101 to MW103).

A detailed quantitative risk assessment (DQRA) completed in March 2007 derived site specific assessment criteria (SSAC) for both a residential and commercial end uses. Concentrations of hydrocarbon in some of the earlier shallow soil samples were found to

² Unless otherwise stated all depths are in metres below existing ground level.

exceed SSAC protective of human health for a residential end use but not a commercial end use.

The petrol station was decommissioned in August 2008 and 14 USTs (tank compartments) and their associated infrastructure were removed. As part of the decommissioning works approximately 354 tonnes of soil were removed from site as hazardous waste, 120 tonnes of inert waste and 1100 tonnes of concrete. Soil samples collected from the decommissioning excavations were found to exceed the human health SSAC for a residential end use at isolated locations and were for the most parts from depths of over 3.0m.

Prior to the implementation of a soil vapour extraction (SVE) remediation scheme in 2009 baseline monitoring of the shallow and deep groundwater wells on site was undertaken and exceedances were recorded in five shallow wells for MTBE (methyl-tert-butyl-ether) (EX5, EX7, EX11, EX12 and EXB). MTBE concentrations in EX13 also exceeded the SSAC that are protective of the shallow aquifer. Within the deep Chalk aquifer dissolved phase concentrations were less than MDLs.

A SVE remediation pilot test undertaken between January and May 2009 is estimated to have removed 145kg of hydrocarbons (benzene equivalent) from beneath the Site. A further 3 month pilot scale operation of the system removed 77kg of hydrocarbons.

Two post remediation groundwater monitoring events carried out in December 2009 and January 2010 did not record concentrations of CoC in either the shallow or deep aquifers exceeding the SSAC.

**Table 2-3:
Previous Assessment Reports**

Date	Report Title and Author
February 2003.	Tier 1 Environmental Assessment Report. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 94271.01.
August 2003.	Tier 2 Environmental Assessment Report. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 94271.02.
October 2003.	Site Specific Risk Assessment. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 942710301.
February 2005.	Groundwater Monitoring Report. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 94271.07.
June 2005.	Environmental Risk Management Strategy. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 942710601.
September 2005.	Additional Environmental Assessment and Monitoring Report. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 942710806.
March 2006.	Additional Groundwater Monitoring Report. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 942710902.
October 2006.	Additional Site Excavation and Soil Vapour Extraction Pilot Test Report. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 942711006.
January 2007.	Remedial Options Appraisal Report and Remedial Implementation Plan. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 942711101_01.
March 2007.	Detailed Quantitative Risk Assessment. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 942711201.
September	Baseline Groundwater Monitoring Report. Westward Service Station, 330

Date	Report Title and Author
2008.	Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 942712001_01.
September 2008.	Environmental Report on Site Decommissioning and Installation of Remediation Infrastructure. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 942711802_01.
June 2009.	Additional SVE Pilot Test Report. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. AGMI Ltd. Report No. 942712209_01.
February 2010.	Additional SVE System Pilot Test Report. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. Arcadis (UK) Ltd. Report No. 942712302_01.
February 2010.	Summary of Environmental Works Completed. Westward Service Station, 330 Tilehurst Road, Tilehurst, Reading, Berkshire. Arcadis (UK) Ltd. Report No. 942712401.

3.0 SITE INSPECTION

3.1 Walk Over Inspection

The inspection was undertaken by a Consultant from SLR on 7th April 2011 and comprised an external walk over of the Site.

3.2 Site Description

The Site is roughly rectangular in shape and covers an area of approximately 0.06ha and has a two storey detached building on its northwestern side. The remainder of the property is surfaced in tarmac hardstanding. Photographs of the Site are contained in Appendix B.

In front of the building is an area of asphalt hardstanding.

3.3 Visual Evidence of Potential Contamination

No visual evidence of significant contamination was noted at the time of the Site inspection.

4.0 GROUNDWATER MONITORING

4.1 Groundwater Monitoring and Sampling

On 7th and 8th April 2011 the existing monitoring wells on site were located and the level of groundwater and presence of non-aqueous phase liquid (NAPL) in each well recorded using an electronic interface probe.

Groundwater was sampled from 13 of the shallow wells within the Lambeth Group using a surface mounted peristaltic pump and low flow techniques in line with the US EPA methodology³. Dissolved oxygen (DO), oxidation reduction potential (ORP), electrical conductivity (EC) and pH were also recorded on site as part of the low sampling process, using a multi-parameter and flow through cell. Dedicated disposable sampling tubing was used for each well during the low flow sampling and all the samples were placed in laboratory supplied vessels, stored in cool boxes and forwarded under chain of custody to Jones Environmental Forensics Limited (JEF) UKAS and MCERTS accredited laboratories in Deeside.

4.2 Groundwater Monitoring Results

Groundwater was encountered in the shallow wells (EX1 to EX13 and EXB) at depths of between 7.58m and 8.09m in the Lambeth Group. MW2, MW4 and MW5 were dry.

Within the deeper wells (MW7 to MW202) groundwater was encountered at depths between 22.89m and 23.74m within the Chalk. The monitoring results are summarised in Appendix C.

Within the shallow wells, groundwater elevations reduce from southwest to northeast across the Site indicating what is considered to be a continuous groundwater body within the Lambeth Group and a northeasterly flow direction. Within the deep boreholes, groundwater elevations reduce from north to south, indicating a southerly flow direction for the deeper groundwater within the Chalk Aquifer.

The depths to groundwater and flow directions in both the shallow and deeper aquifers are broadly consistent with those noted previously.

NAPL was not recorded by SLR in any of the monitoring wells.

³ Puls, R W & Barcelona M J, Low-Flow (Minimal Draw Down) Groundwater Sampling Procedures. EPA/540/S-95/504 April 1996.

5.0 GROUNDWATER QUALITY RESULTS

Groundwater samples from the shallow Lambeth Group boreholes were analysed for speciated total petroleum hydrocarbons (TPH), BTEX compounds (benzene, toluene, ethylbenzene and xylenes) and MTBE. The test results are summarised in Appendix D with the historical Arcadis data and have been compared to the 2007 SSACs. A copy of the test certificates is contained in Appendix E.

TPH, BTEX and MTBE results were less than test method detection limits (MDLs) in EX3, EX4, EX6, EX7, EX8 and EX13.

In the remaining wells one or more determinants were recorded above MDLs, however none of the concentrations exceeded water resource SSAC for the shallow or deeper aquifers.

The April 2011 results show that dissolved phase TPH groundwater concentrations have for the most reduced since January 2010. The exceptions are EX10 and EX12, and in the case of EX12 concentrations remain consistently below the peak values recorded in 2009. No evidence of a significant rebound in dissolved phase concentrations has been recorded in the shallow aquifer following the groundwater remediation works undertaken in 2009.

6.0 SUMMARY AND CONCLUSIONS

6.1 Summary

The Site was first developed and recorded as a garage in the 1960s and historical information provided by the previous landowner (Total UK Limited) indicates it operated a petrol filling station from this date.

Westward Service Station has been the subject of detailed investigation, assessment and remediation work since 2002. The earlier assessment work identified the presence of soil and groundwater contamination impacts from petroleum hydrocarbons. The impacts were largely confined to the shallow soils and groundwater. Widespread and significant impacts were not identified in the deeper Chalk aquifer which is separated from the shallow groundwater by a low permeability clay layer at the base of the Lambeth Group.

Two separate phases of voluntary remedial work were undertaken by Total between 2008 and 2009. The first stage comprised primary soil source removal and the decommissioning of the former petrol station. At that time 14 USTs were removed together with the refuelling forecourt infrastructure (i.e. vent pipes, distribution lines and interceptor) and 354 tonnes of soil that was hazardous waste, 120 tonnes of inert waste soil and 1100 tonnes of concrete.

The second stage of remediation work was carried out between January to March and August to December 2009 and comprised in-situ treatment using soil vapour extraction (SVE) from a network of on site wells. The SVE system removed an estimated 122kg of contaminants. LNAPL was also removed from site and on the two post remediation monitoring visits in December 2009 and January 2010 exceedances of the site specific assessment criteria (SSAC) were not recorded in either the shallow or deeper aquifers.

SLR's March 2011 groundwater data indicates an improvement in groundwater quality that is considered to be a consequence of the earlier remediation work. Dissolved phase concentrations are for the most part less than those noted prior to the commencement of the in-situ remediation work and no exceedances of the SSAC have been noted that would indicate a significant ongoing source of impacts to either groundwater bodies or a rebound in post remediation groundwater concentrations. SLR does not consider that the recorded concentrations present a significant risk to the identified water resource receptors.

Soil impacts were previously identified at concentrations above SSAC derived to be protective of human health. If the site is to be redeveloped and/or a change of use proposed further work will be required to update the earlier shallow soil investigation data, the detailed quantitative risk assessment (DQRA) and assess if any further remediation measures are required. The further work is best carried out once the proposed end use and building layout are known. Any redevelopment or change in the use of the Site would be subject to the implementation of the additional works, appropriate planning consents, Building Control and any necessary mitigation measures.

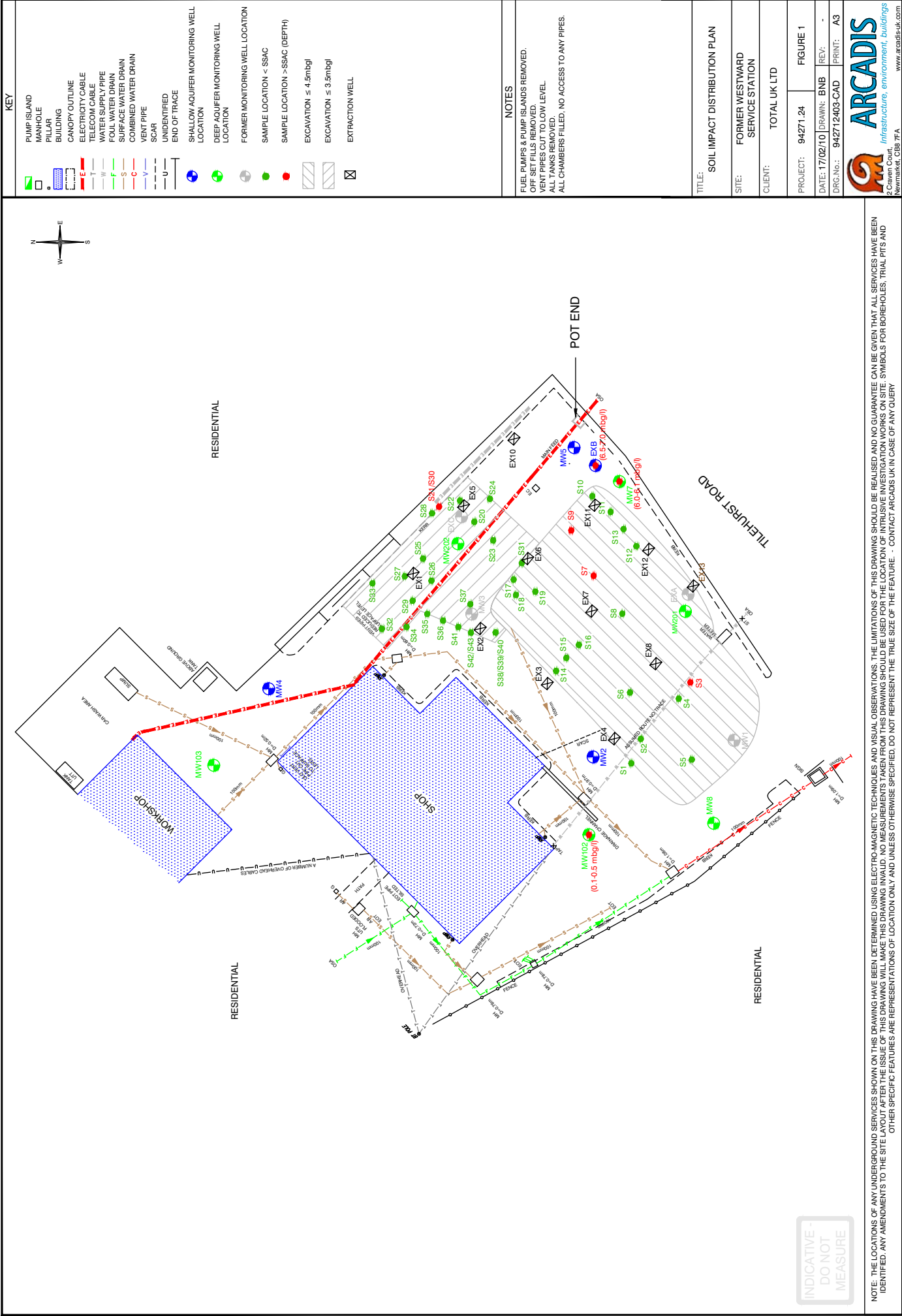
7.0 CLOSURE

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected during the site visit and groundwater monitoring, pertaining particularly to the identification of potential contamination. Information provided to SLR staff has been accepted as being accurate and valid. The scope of the current evaluation excluded physical investigation beyond groundwater monitoring, sampling and analysis.

The evaluation and conclusions presented do not preclude the existence of contamination, which could not reasonably have been revealed by the site visit, nor do they preclude variation of conditions between test holes or the existence of other chemical compounds. Hence, this report should be used for information purposes only and should not be construed as a comprehensive characterisation of all site conditions.

This report is for the exclusive use of London & Boulton Ltd, and their exclusive agents; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.



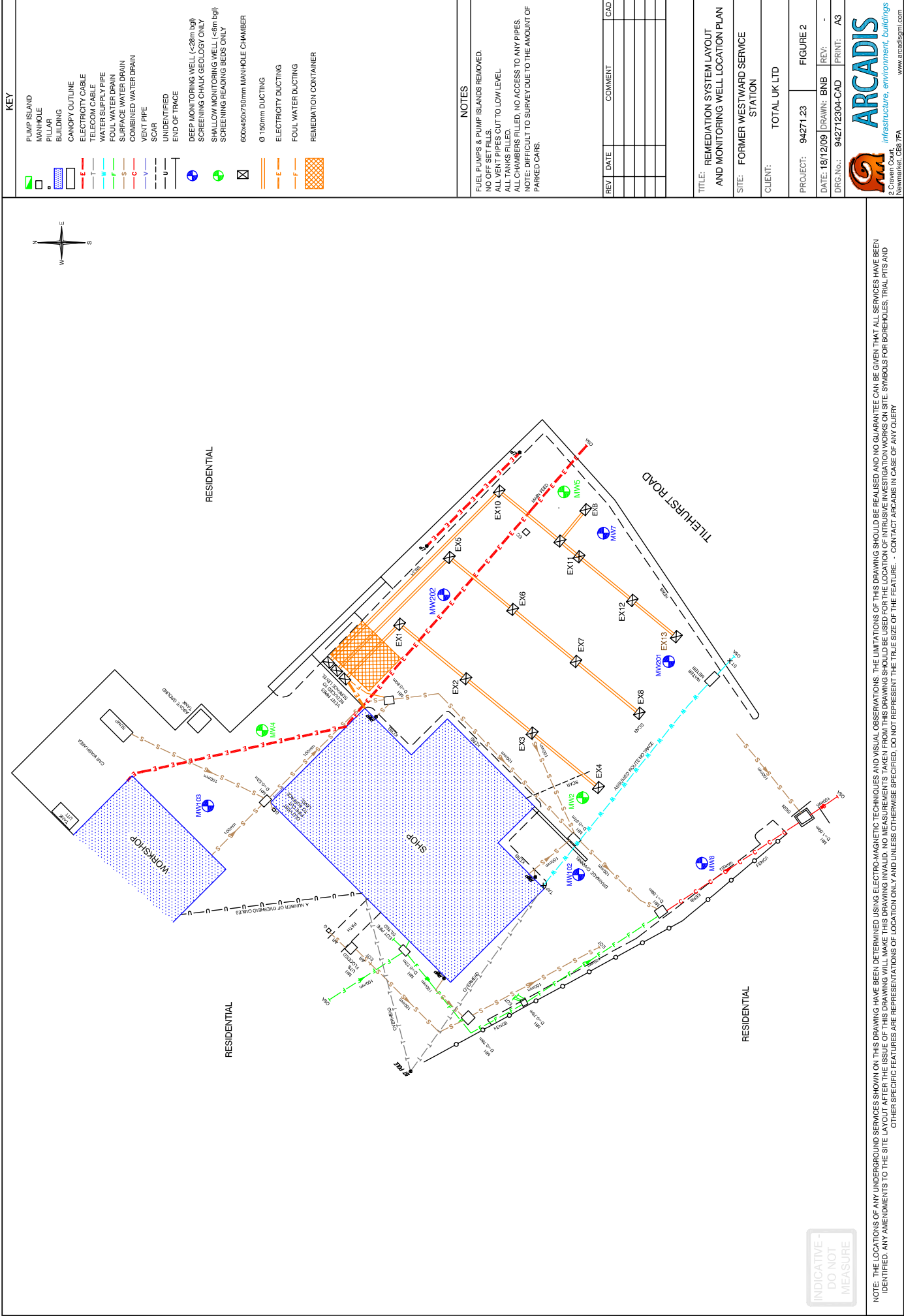




Plate 1.



Plate 2.



Plate 3.



Plate 4.

Aquifer in which Wells Screened		LAMBETH GROUP																CHALK					
Date	Borehole Number	EX1	EX2	EX3	EX4	EX5	EX6	EX7	EX8	EX10	EX11	EX12	EX13	EXB	MW2	MW4	MW5	MW7	MW8	MW102	MW103	MW201	MW202
	Surface Elevation (mASD)	100.00	99.97	99.98	99.98	99.73	99.77	99.84	99.91	99.51	99.64	99.75	99.85	99.5	100.01	100.25	99.36	99.49	99.48	100.11	100.37	99.86	99.81
Sep '08	Depth to SPH (m)	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	-	-	-	NP	NP	NP	NP	NP	NP
	SPH (mm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Groundwater depth (m)*	7.85	7.8	7.76	7.76	7.56	7.6	7.63	7.69	7.34	7.44	7.53	7.63	7.32	dry	-	-	22.8	23.28	23.41	23.500	23.17	23.13
	Groundwater Elevation (mASD)	92.150	92.170	92.220	92.220	92.170	92.170	92.210	92.220	92.170	92.200	92.220	92.220	92.190	-	-	-	76.690	76.200	76.700	76.870	76.690	76.680
May '09	Depth to SPH (m)	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	-	-	-	-	NP	-	NP	NP	NP
	SPH (mm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Groundwater depth (m)*	7.9	7.9	7.8	7.8	7.6	7.62	7.67	7.74	7.37	7.47	7.58	7.66	7.35	dry	-	-	-	23.12	-	23.350	23.25	23.21
	Groundwater Elevation (mASD)	92.100	92.070	92.180	92.180	92.130	92.150	92.170	92.170	92.140	92.170	92.170	92.190	92.160	-	-	-	-	76.360	-	77.020	76.610	76.600
Dec '09	Depth to SPH (m)	NP	NP	NP	NP	NP	NP	NP	-	NP	NP	NP	NP	NP	-	-	-	NP	NP	NP	NP	NP	NP
	SPH (mm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Groundwater depth (m)*	8.03	7.99	7.97	7.97	7.74	7.78	7.83	dry	7.53	7.64	7.71	9.06	7.52	dry	-	-	22.92	23.44	23.57	23.740	23.33	23.24
	Groundwater Elevation (mASD)	91.970	91.980	92.010	92.010	91.990	91.990	92.010	-	91.980	92.000	92.040	90.790	91.990	-	-	-	76.810	76.040	76.540	76.630	76.530	76.570
Jan '10	Depth to SPH (m)	NP	NP	NP	NP	NP	NP	NP	-	NP	NP	NP	NP	NP	-	-	-	NP	NP	-	NP	NP	NP
	SPH (mm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Groundwater depth (m)*	7.97	7.94	7.92	7.91	7.68	7.71	7.76	dry	7.47	7.59	7.7	7.8	7.45	-	-	-	21.9	22.42	-	22.300	22.89	22.26
	Groundwater Elevation (mASD)	92.030	92.030	92.060	92.070	92.050	92.060	92.080	-	92.040	92.050	92.050	92.050	92.060	-	-	-	77.830	77.060	-	78.070	76.970	77.550
Apr '11	Depth to SPH (m)	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	-	-	-	NP	NP	NP	NP	NP	NP
	SPH (mm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Groundwater depth (m)*	8.094	8.049	8.026	8.021	7.792	7.837	7.887	7.964	7.579	7.689	7.782	7.896	7.583	dry	dry	dry	22.989	23.454	23.581	23.737	23.357	23.307
	Groundwater Elevation (mASD)	91.906	91.921	91.954	91.959	91.938	91.933	91.953	91.946	91.931	91.951	91.968	91.954	91.927	-	-	-	76.741	76.026	76.529	76.633	76.503	76.503

Key

SPH Separate phase liquid

NP Not present

- No data recorded

* All depths are in metres below existing ground level

mASD Metres above temporary Site Datum

	SSAC Water Resources																											
	Shallow	Deep	EX1					EX2		EX3		EX4					EX5					EX6		EX7				
Date	Aquifer	Aquifer	Sep-08	May-09	Dec-09	Jan-10	Apr-11	Sep-08	Apr-11	Sep-08	Apr-11	Sep-08	May-09	Dec-09	Jan-10	Apr-11	Sep-08	May-09	Dec-09	Jan-10	Apr-11	Sep-08	Apr-11	Sep-08	May-09	Dec-09	Jan-10	Apr-11
MTBE	1.4	0.27	0.004	0.22	0.0026	0.045	<0.001	0.014	<0.001	<0.001	<0.001	0.009	<0.001	<0.001	<0.001	<0.001	0.34	0.11	0.031	0.063	0.009	0.032	<0.001	0.63	0.017	<0.001	<0.001	<0.001
Benzene	63	1.5	<0.001	0.38	<0.001	0.17	0.006	0.043	0.001	<0.001	<0.001	<0.001	0.001	<0.001	0.0012	<0.001	0.29	0.21	0.11	0.37	0.065	0.041	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	-	250	<0.001	6.9	<0.001	0.7	0.009	2.2	0.007	<0.001	<0.002	0.0014	0.002	<0.001	0.016	<0.002	0.48	0.29	0.92	2.4	2.7	1.5	<0.002	<0.001	0.016	<0.001	0.002	<0.002
Ethyl benzene	-	-	<0.001	0.9	<0.001	0.66	0.003	0.18	0.37	<0.001	<0.002	0.001	0.007	<0.001	0.003	<0.002	0.02	0.91	0.34	1.2	0.98	0.0075	<0.002	<0.001	0.0044	<0.001	0.001	<0.002
m & p Xylene	-	-	<0.001	9.3	<0.001	1.7	0.04	4.5	1.5	<0.001	<0.003	0.006	0.064	<0.001	0.032	<0.003	2.5	4.3	1.9	5.0	6.3	5.9	0.004	<0.001	0.04	<0.001	0.008	<0.003
o Xylene	-	-	<0.001	-	-	-	0.005	-	0.3	<0.001	<0.002	-	-	-	-	<0.002	-	-	-	-	2.7	-	<0.002	-	-	-	-	<0.002
Aliphatics C5-C6	-	33	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0001	<0.005	<0.0001	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	0.073	<0.0001	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.005
Aliphatics >C6-C8	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	0.019	0.075	<0.0001	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	0.0045	<0.0001	<0.0001	0.084	0.14	0.044	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.005
Aliphatics >C8-C10	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	0.05	0.4	<0.0001	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	0.0005	<0.0001	<0.0001	0.026	0.96	0.0016	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.005
Aliphatics >C10-C12	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	0.018	<0.005	<0.0001	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	0.017	<0.0001	<0.0001	<0.0001	<0.005	0.1	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.005
Aliphatics >C12-C16	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	0.022	<0.01	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	0.0061	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01
Aliphatics >C16-C21	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	-	<0.01	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.01	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01
Aliphatics >C21-C35	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01
Total Aliphatics C5-C35	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	0.11	0.47	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	0.028	<0.0001	<0.0001	0.11	1.2	0.15	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01
Aromatics C6-C7	-	-	-	-	-	-	<0.005	-	<0.005	-	<0.005	-	-	-	-	<0.005	-	-	-	-	0.059	-	<0.005	-	-	-	-	<0.005
Aromatics >C7-C8	-	-	-	-	-	-	<0.005	-	0.005	-	<0.005	-	-	-	-	<0.005	-	-	-	-	2.5	-	<0.005	-	-	-	-	<0.005
Aromatics >EC8-EC10	-	-	<0.0001	11	<0.0001	3.2	0.008	4.8	0.56	<0.0001	<0.005	0.014	0.061	<0.0001	0.023	<0.005	2.8	6.2	2.5	24	9.2	13	<0.005	<0.0001	20	<0.0001	0.024	<0.005
Aromatics >EC10-EC12	-	-	<0.0001	0.54	<0.0001	0.13	<0.005	0.46	0.19	<0.0001	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	0.11	0.65	0.66	1.0	0.42	0.59	<0.005	<0.0001	1.5	<0.0001	<0.0001	<0.005
Aromatics >EC12-EC16	-	-	<0.0001	0.08	<0.0001	0.1	<0.01	0.081	<0.01	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	0.067	0.16	0.087	0.15	<0.01	0.087	<0.01	<0.0001	0.16	<0.0001	<0.0001	<0.01
Aromatics >EC16-EC21	-	0.43	<0.0001	<0.0001	<0.0001	0.02	<0.01	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	0.0083	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01
Aromatics >EC21-EC35	-	-	<0.0001	<0.00001	<0.0001	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01
Total Aromatics C6-C35	-	-	<0.0001	12	<0.0001	3.5	<0.01	5.3	0.75	<0.0001	<0.01	0.014	0.061	<0.0001	0.023	<0.01	3.0	7.0	3.2	25	12	14	<0.01	<0.0001	22	<0.0001	0.024	<0.01
TPH (Ali' +Aro' C5-C35)	-	-	<0.01	19	<0.01	4.3	<0.01	7.7	1.2	<0.01	<0.01	0.015	<0.0005	<0.01	0.04	<0.01	3.1	7.5	4.3	28	13	14	<0.01	<0.01	25	<0.01	0.026	<0.01
Conductivity (µS/cm)	-	-	-	525	114	755	991	-	488	-	662	-	559	107	167	660	-	581	168	784	1083	-	1167	-	517	334	555	834
ORP (mV)	-	-	-	-201	-113	-144	-219	-	-211	-	-102	-	-184	54	-80	-168	-	-218	-8.2	-112	-210	-	-112	-	-207	39	29	-49
Dissolved oxygen	-	-	-	0.82	0.24	0.44	<0.01	-	<0.01	-	<0.01	-	0.6	0.48	0.49	<0.01	-	0.86	0.84	0.44	<0.01	-	<0.01	-	1.1	0.99	1.8	<0.01
pH	-	-	-	7.1	6.7	5.3	5.9	-	6.2	-	5.7	-	7.8	6.5	7.3	6.1	-	7.3	5.9	6.6	5.7	-	6.2	-	6.9	6.2	7.3	5.5
Total Iron	-	-	-	-	-	-	0.72	-	3.8	-	0.59	-	-	-	-	0.65	-	-	-	-	16	-	0.57	-	-	-	-	0.84
Total Manganese	-	-	-	-	-	-	2.0	-	0.87	-	0.78	-	-	-	-	0.84	-	-	-	-	5.6	-	1.0	-	-	-	-	0.14
Sulphate	-	-	-	-	-	-	257	-	6.5	-	98	-	-	-	-	88	-	-	-	-	242	-	334	-	-	-	-	214
Nitrate as N	-	-	-	-	-	-	0.36	-	0.07	-	1.2	-	-	-	-	0.2	-	-	-	-	0.09	-	0.09	-	-	-	-	12
Sulphide	-	-	-	-	-	-	<0.3	-	<0.3	-	<0.3	-	-	-	-	<0.3	-	-	-	-	<0.3	-	<0.3	-	-	-	-	<0.3
Dissolved Methane	-	-	-	-	-	-	0.005	-	0.37	-	<0.001	-	-	-	-	<0.001	-	-	-	-	0.092	-	<0.001	-	-	-	-	<0.001
DIC	-	-	-	-	-	-	62	-	53	-	51	-	-	-	-	58	-	-	-	-	79	-	72	-	-	-	-	38
Iron II	-	-	-	-	-	-	0.62	-	2.4	-	0.06	-	-	-	-	0.63	-	-	-	-	2.1	-	0.56	-	-	-	-	0.09
Iron III	-	-	-	-	-	-	0.1	-	1.4	-	0.53	-	-	-	-	<0.02	-	-	-	-	14	-	<0.02	-	-	-	-	0.75
Manganese II	-	-	-	-	-	-	0.41	-	0.46	-	0.75	-	-	-	-	0.65	-	-	-	-	0.6	-	0.5	-	-	-	-	<0.02

	SSAC Water Resources																						
	Shallow	Deep	EX8		EX10		EX11		EX12					EX13					EXB				
Date	Aquifer	Aquifer	Sep-08	Apr-11	Sep-08	Apr-11	Sep-08	Apr-11	Sep-08	May-09	Dec-09	Jan-10	Apr-11	Sep-08	May-09	Dec-09	Jan-10	Apr-11	Sep-08	May-09	Dec-09	Jan-10	Apr-11
MTBE	1.4	0.27	0.009	<0.001	0.093	0.011	0.79	<0.001	0.79	0.033	<0.001	<0.001	<0.001	6.2	<0.001	<0.001	<0.001	<0.001	0.97	0.36	<0.001	0.051	<0.001
Benzene	63	1.5	<0.001	<0.001	0.12	0.013	0.58	0.095	0.27	0.13	0.065	<0.001	0.004	0.13	<0.001	<0.001	0.0085	<0.001	1.1	0.63	0.13	0.36	0.12
Toluene	-	250	<0.001	<0.002	0.012	0.009	3.1	0.087	2.8	3.2	0.25	0.013	0.32	0.41	0.0047	<0.001	0.31	<0.002	3.1	7.9	1.6	1.9	0.68
Ethyl benzene	-	-	<0.001	<0.002	0.057	0.002	3.1	0.49	2.8	2.8	0.4	0.18	0.75	0.2	0.0088	<0.001	0.57	<0.002	4.1	2.3	0.067	1.2	1.5
m & p Xylene	-	-	<0.001	<0.003	0.45	0.056	6.2	0.8	6.2	14	5.7	2.4	4.7	2.8	0.17	0.27	9.4	0.005	7.3	15	2.6	4.7	3.5
o Xylene	-	-	<0.001	<0.002	0.013	0.33	0.33	0.86	0.33	0.86	0.33	0.86	0.86	0.33	0.86	0.33	0.86	<0.002	0.33	0.86	0.33	0.86	1.8
Aliphatics C5-C6	-	33	<0.0001	<0.005	<0.0001	0.098	<0.0001	0.016	<0.0001	<0.0001	<0.0001	<0.0001	0.012	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.005
Aliphatics >C6-C8	-	-	<0.0001	<0.005	<0.0001	0.1	0.0099	0.076	0.31	<0.0001	0.049	<0.0001	0.21	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	0.44	0.093	<0.0001	0.11	0.2
Aliphatics >C8-C10	-	-	<0.0001	<0.005	<0.0001	0.06	0.011	0.14	0.078	<0.0001	0.0094	<0.0001	1.9	<0.0001	<0.0001	0.008	<0.0001	<0.005	0.35	0.18	<0.0001	0.013	1.2
Aliphatics >C10-C12	-	-	<0.0001	<0.005	<0.0001	<0.005	0.0094	<0.005	0.94	<0.0001	0.003	<0.0001	0.06	<0.0001	<0.0001	0.003	<0.0001	<0.005	0.82	<0.0001	<0.0001	<0.0001	<0.005
Aliphatics >C12-C16	-	-	<0.0001	<0.01	<0.0001	<0.01	0.012	<0.01	0.39	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	3.5	<0.0001	<0.0001	<0.0001	<0.01
Aliphatics >C16-C21	-	-	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.01	0.25	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	2.5	<0.0001	<0.0001	<0.0001	<0.01
Aliphatics >C21-C35	-	-	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.01	0.25	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	2.5	<0.0001	<0.0001	<0.0001	<0.01
Total Aliphatics C5-C35	-	-	<0.0001	<0.01	<0.0001	0.26	0.042	0.23	2.0	<0.0001	0.061	<0.0001	2.2	<0.0001	<0.0001	0.011	<0.0001	<0.01	7.6	0.27	<0.0001	0.12	1.4
Aromatics C6-C7	-	-	-	<0.005	-	0.017	-	0.065	-	-	-	-	<0.005	-	-	-	-	<0.005	-	-	-	-	0.11
Aromatics >C7-C8	-	-	-	<0.005	-	0.006	-	0.059	-	-	-	-	0.34	-	-	-	-	<0.005	-	-	-	-	0.86
Aromatics >EC8-EC10	-	-	<0.0001	<0.005	0.06	0.088	12	1.1	9.2	20	13	5.1	8.1	3.1	0.16	0.43	13	<0.005	12	22	3.1	16.0	7.0
Aromatics >EC10-EC12	-	-	<0.0001	<0.005	0.019	0.11	0.45	0.15	1.3	1.5	1.6	0.89	0.65	0.13	<0.0001	0.16	0.74	<0.005	3.2	2.3	1.4	0.96	0.45
Aromatics >EC12-EC16	-	-	<0.0001	<0.01	0.019	<0.01	0.054	<0.01	0.057	0.16	0.044	0.24	0.06	0.05	<0.0001	0.012	0.12	<0.01	0.48	0.21	0.15	0.15	0.04
Aromatics >EC16-EC21	-	0.43	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.01	0.0062	<0.0001	<0.0001	0.015	<0.01	<0.0001	<0.0001	<0.0001	0.0005	<0.01	0.12	<0.0001	0.012	<0.0001	<0.01
Aromatics >EC21-EC35	-	-	<0.0001	<0.01	<0.0001	<0.01	<0.0001	<0.01	0.011	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	0.041	<0.0001	<0.0001	<0.0001	<0.01
Total Aromatics C6-C35	-	-	<0.0001	<0.01	0.098	0.22	13	1.4	11	22	15	6.2	9.2	3.3	0.16	0.6	14	<0.01	16	25	4.7	17	8.5
TPH (Ali' +Aro' C5-C35)	-	-	<0.01	<0.01	0.098	0.48	24	1.6	16	25	15	6.3	11	3.8	0.16	0.6	14	<0.01	28	33	6.4	19	10
Conductivity (µS/cm)	-	-	-	798	-	953	-	927	-	673	558	1155	1411	-	541	-	1117	1085	-	722	236	1301	1120
ORP (mV)	-	-	-	-84	-	-187	-	-224	-	-234	-67	-91	-218	-	-143	-	-89	-100	-	-190	-176	-236	-258
Dissolved oxygen	-	-	-	<0.01	-	<0.01	-	<0.01	-	0.67	0.35	0.57	<0.01	-	2.4	-	0.48	<0.01	-	0.79	0.59	0.25	<0.01
pH	-	-	-	5.7	-	5.7	-	5.8	-	7.3	6.6	6.6	5.7	-	6.9	-	6.7	5.3	-	7.2	6.2	6.8	5.8
Total Iron	-	-	-	1.2	-	4.4	-	2.6	-	-	-	-	5.5	-	-	-	-	0.08	-	-	-	-	4.1
Total Manganese	-	-	-	0.22	-	10	-	1.1	-	-	-	-	4.2	-	-	-	-	0.38	-	-	-	-	3.4
Sulphate	-	-	-	137	-	107	-	129	-	-	-	-	317	-	-	-	-	313	-	-	-	-	43
Nitrate as N	-	-	-	2.2	-	<0.05	-	0.07	-	-	-	-	0.11	-	-	-	-	4.7	-	-	-	-	<0.05
Sulphide	-	-	-	<0.3	-	<0.3	-	<0.3	-	-	-	-	<0.3	-	-	-	-	<0.3	-	-	-	-	<0.3
Dissolved Methane	-	-	-	<0.001	-	0.1	-	0.02	-	-	-	-	0.006	-	-	-	-	<0.001	-	-	-	-	0.11
DIC	-	-	-	56	-	87	-	93	-	-	-	-	107	-	-	-	-	62	-	-	-	-	121
Iron II	-	-	-	0.12	-	1.8	-	0.09	-	-	-	-	2.1	-	-	-	-	<0.02	-	-	-	-	1.6
Iron III	-	-	-	1.1	-	2.5	-	2.5	-	-	-	-	3.4	-	-	-	-	0.08	-	-	-	-	2.4
Manganese II	-	-	-	0.18	-	0.84	-	<0.10	-	-	-	-	0.55	-	-	-	-	0.36	-	-	-	-	0.64



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No.4225

Attention :	Peter Warland
Date :	20th April, 2011
Your reference :	408.03545.00004
Our reference :	Test Report 11/3468 Batch 1
Location :	WESTWARD S.S
Date samples received :	11th April, 2011
Status :	Final report
Issue :	1

Seven samples were received for analysis on 11th April, 2011, which was completed on 20th April 2011. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

J W Farrell- Jones CChem FRSC
Chartered Chemist

Client Name: SLR Consulting Ltd
Reference: 408.03545.00004
Location: WESTWARD S.S
Contact: Peter Warland
JE Job No.: 11/3468

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

Please see attached notes for all abbreviations and acronyms										
J E Sample No.	1-6	7-12	13-18	19-24	25-30	31-36	37-42			
Sample ID	EX1	EX5	EX10	EXB	EX11	EX6	EX2			
Depth	8.6	8.4	8.2	8.5	8.2	8.3	8.3			
COC No / misc										
Containers	V HCL P G	V HCL P G	V HCL P G	V HCL P G	V HCL P G	V HCL P G	V HCL P G			
Sample Date	07/04/2011	07/04/2011	07/04/2011	07/04/2011	07/04/2011	07/04/2011	07/04/2011			
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water			
Batch Number	1	1	1	1	1	1	1			
Date of Receipt	11/04/2011	11/04/2011	11/04/2011	11/04/2011	11/04/2011	11/04/2011	11/04/2011			
Total Iron	0.72	16.49	4.35	4.05	2.58	0.57	3.81			
Total Manganese	1.999	5.638	10.010	3.439	1.126	1.010	0.874			
Methyl Tertiary Butyl Ether [#]	<0.001	0.009	0.011	<0.001	<0.001	<0.001	<0.001			
Benzene [#]	0.006	0.065	0.013	0.120	0.095	<0.001	0.001			
Toluene [#]	0.009	2.668	0.009	0.682	0.087	<0.002	0.007			
Ethylbenzene [#]	0.003	0.978	0.002	1.543	0.490	<0.002	0.369			
p/m-Xylene [#]	0.040	6.281	0.056	3.544	0.802	0.004	1.539			
o-Xylene [#]	0.005	2.692	0.013	1.789	0.325	<0.002	0.298			
TPH CWG										
Aliphatics										
>C5-C6	<0.005	0.073	0.098	<0.005	0.016	<0.005	<0.005			
>C6-C8	<0.005	0.141	0.103	0.204	0.076	<0.005	0.075			
>C8-C10	<0.005	0.955	0.060	1.170	0.138	<0.005	0.395			
>C10-C12	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			
>C12-C16	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
>C16-C21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
>C21-C35	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Total aliphatics C5-35	<0.01	1.17	0.26	1.37	0.23	<0.01	0.47			
Aromatics										
>C5-EC7	<0.005	0.059	0.017	0.107	0.065	<0.005	<0.005			
>EC7-EC8	<0.005	2.524	0.006	0.861	0.059	<0.005	0.005			
>EC8-EC10	0.008	9.210	0.088	7.045	1.126	<0.005	0.557			
>EC10-EC12	<0.005	0.416	0.109	0.454	0.145	<0.005	0.192			
>EC12-EC16	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	<0.01			
>EC16-EC21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
>EC21-EC35	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Total aromatics C5-35	<0.01	12.21	0.22	8.51	1.40	<0.01	0.75			
Total aliphatics and aromatics(C5-35)	<0.01	13.38	0.48	9.88	1.63	<0.01	1.22			
Sulphate [#]	256.68	241.87	106.72	43.22	129.44	334.13	6.53			
Nitrate as N [#]	0.36	0.09	<0.05	<0.05	0.07	0.09	0.07			
Sulphide	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3			
Dissolved Methane	0.005	0.092	0.103	0.113	0.020	<0.001	0.373			
Dissolved Inorganic Carbon	62	79	87	121	93	72	53			
Iron II	0.62	2.14	1.84	1.64	0.09	0.56	2.41			
Iron III	0.10	14.35	2.51	2.41	2.49	<0.02	1.40			
Manganese II	0.41	0.60	0.84	0.64	<0.10	0.50	0.46			

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C

Asbestos screens where requested will be undertaken by a UKAS accredited laboratory.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory. It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples. All samples are treated as groundwaters and analysis performed on settled samples unless we are instructed otherwise.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any analysis that may be compromised highlighted on your schedule/ report by the use of a symbol.

The use of any of the following symbols indicates that the sample was deviating and the test result may be unreliable:

\$	Sample temperature on receipt considered inappropriate for analysis requested.
^	Samples exceeding recommended holding times.
&	Samples received in inappropriate containers (e.g. volatile samples not submitted in VOC jars/vials).
~	No sampling date given, unable to confirm if samples are with acceptable holding times.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 50 - 150%. Results are not surrogate corrected.

AQC's

Where AQC's fall outside UKAS/MCERTS criteria analysis is repeated if possible.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
M	MCERTS accredited.
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
SS	Calibrated against a single substance.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
W	Results expressed on as received basis.
+	AQC is outside our current performance criteria. Results should be considered as indicative only and are not accredited. However the AQC is within UKAS/MCERTS acceptance criteria.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
SE	Surrogate recovery outside performance criteria. Results not accredited.
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
DR	Dilution required.

[illegible]



global environmental solutions

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